

REMARKS

Favorable reconsideration of the above-identified application is requested in view of the following remarks.

Claims 2-7, 10 and 11 are canceled, and Claims 12-22 are newly added. Thus, Claims 1, 8, 9 and 12-22 are pending in this application, with Claims 1, 8 and 9 being independent and amended. Support for the amendments may be found in the present application, e.g., at least in paragraphs [0099], [0100], [0116], [0119], [0120], [0123-0131], [0137-0139], [0147], [0148], [0164], [0175] and [0180].

Claims 1-3, 5, 6 and 8-11 are rejected under 35 U.S.C. § 103(a) as being anticipated by U.S. Patent No. 6,023,527, hereinafter *Narahara*, in view of U.S. Patent No. 6,388,674, hereinafter *Ito*.

Claim 1 is amended to better define determination of a compression parameter in a direction of chroma for converting data in an input color space into data in an output color space by estimating a general shape of the input color space and output color space based on the obtained data related to the first specific color of a first device and related to the second specific color of a second device.

Claim 1 now defines a color matching method in which, when color reproduction ranges of a first device and a second device differ, image data within a color reproduction range of the first device is converted using a conversion parameter into image data within a color reproduction range of the second device. Data relating to a first specific color of the first device and data relating to a second specific color of the second device in a prescribed color space is obtained. Determination is made of a compression parameter in a direction of chroma for converting data in an input color space into data in a output color space by

estimating a general shape of the input color space and output color space based on the obtained data related to the first specific color of the first device and related to the second specific color of the second device.

Narahara discloses selection of a color space mapping technique for an output color space. In *Narahara*, a first device gamut is systematically mapped into a second device gamut by using a predetermined set of mapping techniques, and based upon a predetermined index of the generated output color quality, the best mapping technique is selected (abstract). In column 4, lines 61-67, *Narahara* describes that “[i]n order to map the gamuts, the color correction or color mapping units 7-13 determine the best mapping technique by comparing the actual output images generated by a plurality of predetermined mapping techniques. The best mapping technique is stored, and the subsequent mapping processes are performed based upon the best mapping technique.” A plurality of predetermined mapping techniques is stored in a memory, and the mapping technique control unit 12 retrieves the particular mapping technique at a given time (column 5, lines 18-22). The signal produced with the particular mapping technique is evaluated by an image characteristics processing unit 8, which generates a characteristic signal which is sent to a mapping evaluation unit 9 (column 5, lines 29-35). The evaluation signal for every mapping technique is accumulated and sent to a mapping technique decision unit 11, which selects the best or most desirable mapping technique among the predetermined mapping techniques (column 5, lines 40-45). *Narahara* discloses selection of a predetermined mapping technique from a series of stored mapping techniques.

Ito discloses gamut mapping involving creation of a backward look-up table and a forward look-up table. Through use of the look-up tables, a three-dimensional compression is made to compress the color of areas C and D to an area (A+B), and a two-dimensional compression (shrinking) is made to compress the color of the area (B+C) to the area B, for example.

Although *Narahara* and *Ito* carry out compression of lightness based on data related to a specific color, they do not use a specific color for determination of the parameter related to chroma conversion. For example, they do not use a white point for the parameter related to chroma conversion.

Specifically, in the color correction method disclosed in column 7, lines 23-61, in *Narahara*, compression in the direction of chroma is not conducted, and only mapping of the color gamut is conducted. The color in the color gamut is not compressed, and the color outside the color gamut is converted into a color in the color gamut that is closest. Although the white point, black point, and the maximum chroma point in the output color space are referred to, a specific color in the input color space is not used.

Ito discloses, in column 7, line 64 to column 8, line 4, the summary of color gamut conversion, and details thereof in column 8, lines 5 and so on. Although correction in lightness is taught in column 8, line 5 to column 9, line 2, only compression in lightness is conducted, and correction in chroma is not conducted. Further, although compression in lightness, chroma, and hue is mentioned in column 9, lines 19 and so on, a specific color in the input color space is not used therefore. That is, the hue h is fixed, and the color of the maximum chroma value C^*_{max} is referred to.

All the disclosures in *Narahara* and *Ito* are silent about determining a compression parameter in the direction of chroma for converting data in an input color space into data in an output color space by estimating the general shape of the input color space and the output color space based on data related to a specific color.

For at least those reasons, Claim 1 is allowable.

Claims 8 and 9 are allowable for similar reasons as those set forth above with respect to Claim 1.

New Claims 12-22 are allowable at least by virtue of their dependence from allowable independent claims, and also because they define features that distinguish over the cited disclosure.

For the reasons stated above, it is requested that all the rejections be withdrawn and that this application be allowed in a timely manner.


Should any questions arise in connection with this application, or should the Examiner feel that a teleconference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned requests that he be contacted at the number indicated below.

Respectfully submitted,

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(INCLUDING ATTORNEYS FROM BURNS DOANE SWECKER & MATHIS)

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